

Abstract

Techniques for measuring the temperature at various locations through the thickness of glass products and to control the glass processing operation with the sensed temperature information are disclosed. Fluorescence emission of iron or cerium in glass is excited and imaged onto segmented detectors. Spatially resolved temperature data are obtained through correlation of the detected photoluminescence signal with location within the glass. In one form the detected photoluminescence is compared to detected scattered excitation light to determine temperature. Stress information is obtained from the time history of the temperature profile data and used to evaluate the quality of processed glass. A heating or cooling rate of the glass is also controlled to maintain a predetermined desired temperature profile in the glass.